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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,043	11/17/2003	Wei Ding	AP818CIP	1154
33361 7590 11/28/2007 ADAMS PATENT & TRADEMARK AGENCY P.O. BOX 11100, STATION H OTTAWA, ON K2H 7T8 CANADA			EXAMINER CHENG, JACQUELINE	
			ART UNIT 3768	PAPER NUMBER
			MAIL DATE 11/28/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/713,043	<b>Applicant(s)</b> DING, WEI	
	<b>Examiner</b> Jacqueline Cheng	<b>Art Unit</b> 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 September 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed September 19, 2007 have been fully considered but they are not persuasive. The examiner respectfully disagrees with the applicant's arguments that Ishikawa does not disclose artifacts representing the radiation sensors. Fig. 2 is a *diagram* of a tumor with the sensors, therefore it is not an image taken of the sensors and therefore is an artifact that represents the sensors, not the actual sensors themselves. To further this point Ishikawa also discloses that the sensors send out a signal allowing its location to be identified so that it can then be represented on a fluoroscopic map of the tumor (col. 5 line 25-31).
2. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claim 1, 3, 6-13 and 18-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa (US 6,398,710 B1) in view of Taylor (US 6530875 B1).
5. **Claims 1, 3, 6, 9, 13, 18 and 21:** Ishikawa discloses a radiation dosimetry system that uses miniature implanted transponder balls as radiation sensors. Each radiation sensors has an

individual unique identifier that allows its location to be identified and superimposed on a display as a plurality of graphic artifacts on a representation of an image of the irradiated body part (col. 5 line 23-31, fig. 2). The unique identifiers also allow each of the transponders to be polled for the dosage level each sensor is experiencing during irradiation, which is shown on a display (abstract, col. 5 line 42-47). Ishikawa does not explicitly disclose how this information about each of the radiation dosage the sensors are reading is displayed. It would be obvious to one skilled in the art at the time of the invention to use any well known method of displaying information such as disclosed by Taylor. Taylor discloses displaying information by using an identifier to represent an artifact and listing data associated with the identifier (fig. 7a, col. 12 line 65-col. 13 line 6). It would be obvious to one skilled in the art at the time of the invention to display the information of Ishikawa by having an identifier (such as the individual unique identifier already associated with the radiation sensors) and list the dosage level associated with the identifier as each sensor is polled. Using the method of Taylor to display information would be useful so that physician knows which radiation sensor is reading what dosage. A random listing of the dosage readings would not be helpful in determining if the radiation is being applied as desired.

6. **Claims 8, 10, 20, and 22:** The limitations of how the data is displayed along with their identifiers are design choices and can be displayed in any way known in the art. To print out information and having an identifier separate from the icon artifact and with a lead line connecting the two are all very well known display methods known in the art (see paragraph 0064 or US 2003/0139700 A1 to Elliott for printing out a report, and see the drawings in Elliott for a lead line connecting an identifier).

7. **Claims 7, 11, 12, 19, and 23-26:** Ishikawa discloses that the graphic artifacts are superimposed on a fluoroscopic map of the area (col. 5 line 30-31). It would be obvious to one skilled in the art at the time of the invention to further the utility of Ishikawa to superimpose the artifacts on any known imaging modality that is known in the art at the time of the invention such as computer generated images and photos of the patient body.

8. **Claims 2, 4 and 14-16** are rejected under U.S.C. 35 103(a) as being unpatentable over Ishikawa in view of Taylor further in view of Jackson, Jr. (US 6,360,116 B1). Ishikawa and Taylor disclose most of what is claimed except displaying information about the target dosage amount versus an actual dosage amount. All radiation system have a target dosage which one wants to apply. It would be obvious to display this information next to the actual dosage information to further the utility of Ishikawa to be able to determine if the right amount of radiation is being reached, or if it is being surpassed such as disclosed by Jackson, Jr. Jackson Jr. discloses displaying a target dose volume as well as displaying the actual dosage. Jackson Jr. also discloses a post-operative evaluation of the treatment delivery showing that one would be motivated by a feature of a machine used for a purpose of treatment delivery for radiation dose measurement (col. 11 line 1-35, fig. 8).

9. **Claims 5 and 17** are rejected under U.S.C. 35 103(a) as being unpatentable over Ishikawa in view of Taylor in view of Jackson, Jr. further in view of Elliott (US Publication No 2003/0139700 A1). It would be obvious add to the display a listing of a deviation of a measured radiation dosage from a target dose as disclosed by Elliott in order to further the utility of

Ishikawa to help the operator to easily see how far and how much longer the radiation should be applied in order to reach the target goal (paragraphs 0057-0059 of Elliott, col. 5 line 45-51 of Ishikawa). Jackson Jr. discloses a post-operative evaluation as well as a treatment delivery plan and evaluation showing that one would be motivated by a feature of a machine used for a purpose of treatment delivery for radiation dose measurement (abstract).

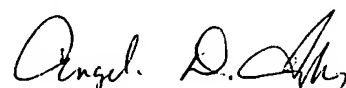
### *Conclusion*

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacqueline Cheng whose telephone number is 571-272-5596. The examiner can normally be reached on M-F 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JC



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